	non-IRA	IRA with residual ischemia	IRA without residual ischemia
n	18	6	7
% diameter stenosis	70±7	69±10	64±7
FFR	0.57±10	0.70±0.08	0.83±0.04
CFVR	1.58±0.53	1.21±0.22	2.62±0.67

4:12 p.m.

1195MP-127 Impact of Smoking Habit on Clinical Outcomes After Percutaneous Coronary Intervention

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Background: A smoker's paradox has been described after thrombolysis and PCI in acute MI, as the unadjusted early and late mortality of current smokers is low. The long-term prognostic implications of smoking at the time of PCI in the non-acute MI setting is unclear.

Methods: Between 1994 and 1999, 5,592 consecutive pts underwent successful PCI of *de novo* lesions in native coronary arteries in a single center. Event-free survival was examined and stratified by smoking status at the time of intervention (1,025 current smokers, 2,155 ex-smokers and 2,412 nonsmokers).

Results: Baseline characteristics between the non smokers and ex-smokers were similar. In contrast, current smokers, compared to either the ex- or non smokers, were younger (mean age 57 ± 11 yrs vs. 65 ± 11 yrs vs. 66 ± 11 years respectively, p<0.0001) and had lower rates of diabetes mellitus (21% vs. 30% vs. 31%, p<0.0001) and lower rates of hypertension. The *adjusted odds ratios* (OR) and 95% confidence intervals (CI) of the adverse events in-hospital and at one year for the current and ex-smokers relative to the non smokers are shown in the table.

	Non Smoker (n=2,412) OR	Ex-Smoker (n=2,155) OR [95% CI], P	Current smoker (n=1,025) OR [95% CI], P
In-hospital			
Death	1.0	0.58 [0.37-0.89], p=0.01	0.50 [0.22-1.13],p=0.10
MI	1.0	1.00 [0.89-1.14], p=0.96	1.22 [1.04-1.43], p=0.02
TLR	1.0	0.84 [0.56-1.25], p=0.39	0.71 [0.41-1.24], p=0.23
1-year:			
Death	1.0	1.0 [0.83-1.21], p=0.99	1.46 [1.12-1.90], p=0.006
MI	1.0	1.11 [0.67-1.85], p=0.68	1.45 [0.80-2.63], p=0.23
TLR	1.0	1.02 [0.91-1.15], p=0.68	0.87 [0.74-1.02], p=0.09

Conclusions: Previous smokers who quit prior to PCI have similar prognosis to pts who never smoked. In contrast in-hospital MI and 1-year mortality after PCI is significantly increased in active smokers despite their more favorable baseline risk profile. These data emphasize the favorable impact of discontinuing smoking on long-term clinical outcome after PCI.

4:24 p.m.

1195MP-128 Cardiac Rehabilitation Participation Decreases the Need for Target Vessel Revascularization Following Percutaneous Coronary Intervention

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Background: Participation in Cardiac rehabilitation (CR) after myocardial infarction has been demonstrated previously to decrease mortality and morbidity. Only a few studies with small numbers of patients have investigated the potential beneficial effects of CR following percutaneous coronary intervention (PCI)

Methods : We analyzed retrospective data on 525 consecutive patients who underwent PCI at Henry Ford hospital (HFH) from 6/98-2/99. We were able to obtain 6-months follow-up on 501 patients. 120 of those patients participated in the CR program at HFH and 381 did not. All baseline demographic and clinical variables were similar between the CR and non-CR group except race and presence of pre-PCI TIMI flow 0. The CR group had 35% African American, non-CR group 20%, p=0.004. The CR group had pre-PCI TIMI flow 0 28.4%, non-CR group 18.6%, p=0.04.

Results : Rate of Target vessel revascularization (TVR) was significantly lower in the patients participating in CR (12.5%) vs. the non-CR group (20.7%), p=0.037, odds ratio (OR) 0.55. There was no significant difference in the need for re-hospitalization between the CR and non-CR group. Analysis of independent variables associated with TVR and the need for re-hospitalization was significant for female gender (p=0.046, p=0.016) and graft disease (p=0.04, p=0.045). Multivariate logistic regression analysis using a selection rule of p<0.25 revealed a significant difference for rate of TVR between the CR and non-CR group (p=0.049, OR 0.55) and for female gender p=0.043, OR 1.16). Female gender was also significantly associated with the need for re-hospitalization (p=0.015, OR 1.61)

Conclusion : This non-randomizes retrospective study suggest a significant benefit of participating in CR following PCI with a significant decrease in the need for TVR at 6-month follow p. A large prospective randomized clinical trial is necessary to confirm this important finding.

4:36 p.m.

1195MP-129 Long-Term Follow-Up After Coronary Angioplasty in Young Patients (<40 Years of Age)

Remi Choussat, Alexander Black, Jean-Pierre Laurent, Bernard Cassagneau, Bruno Farah, Jean Fajadet, Jean Marco, *Unite de Cardiology Interventionnelle, Clinique Pasteur, Toulouse, France.*

Background: Young patients are now commonly treated by percutaneous coronary intervention (PCI). However, there is little information available concerning the results of the procedure. The purpose of this single center study was to evaluate the long-term outcome of PCI in young adults.

Methods: Between July1995 and July 1999, 103 consecutive patients younger than 40 years of age (men: 98 cases; mean age 36.9±2.0 years) were treated by PCI. These patients comprised 1.3% of 8181 patients who underwent PCI during this period in our institution. Demographic, clinical and procedural predictors of survival and event-free survival, defined as freedom from death, myocardial infarction (MI), coronary revascularization (target vessel (TVR) and any coronary revascularisation) were analyzed. Follow-up (mean duration 30.2±12.1 months) was obtained in all patients.

Results: At admission, 14 patients had stable angina, 45 had unstable angina and 36 had recent MI (< 1 month). Coronary risk factors were smoking in 94 cases, history of hypercholesterolemia in 48, systemic hypertension in 14 and diabetes mellitus in 6. One vessel disease was found in 52 patients and 3 vessel disease in 15. Mean left ventricular ejection fraction was 63±5%. Stent implantation was performed in 67 cases. Primary success was obtained in 102 patients. At follow-up no patient died, 2 had MI and 22 underwent repeat coronary revascularization (14 target vessel revascularization and 13 non-target vessel revascularization). The estimated 3-year event-free survival (freedom from death/MI and freedom from death/MI/target and non-target vessel revascularization) were (mean±SE) 98.0±1.3% and 76.6±5.1%. At end of follow-up, 18 patients were still current smokers, 83 were on lipid lowering therapy and 89 patients were free of angina. No factor was found to be predictive of cardiac events in uni- or multivariate statistical analysis.

Conclusion: Early and late results after PCI in young adults (< 40 years of age) are favorable in terms of survival despite the need of repeat procedures due to restenosis and progression of atherosclerotic coronary artery disease in non target vessel.

4:48 p.m.

1195MP-130 Long-Term Outcome After Long Lesion (>25 mm) PCI in 390 Consecutive Patients: A Single Center Experience

Remi Choussat, Catherine Klersy, Alexander Black, Bernard Cassagneau, Jean-Pierre Laurent, Christian Jordan, Jean Fajadet, Jean Marco, *Unite de Cardiology Interventionnelle, Toulouse, France.*

Background: PCI of long coronary lesion is now common practice, however, there is little information available concerning long-term follow-up. The purpose of this single-center study was to evaluate the long-term outcome of PCI for long lesions in a large consecutive series of patients.

Methods: Between May 1995 and December 1998, 390 consecutive patients with long coronary lesion (> 25 mm length; mean lesion length: 34 ± 10 mm) underwent PCI. These patients comprised 5.3% of 7336 patients who underwent PCI during this period in our institution. Demographic, clinical and procedural predictors of survival and event-free survival, defined as freedom from death, myocardial infarction (MI), coronary revascularization (target vessel (TVR) and any coronary revascularisation) were analyzed.

Results: Follow-up (mean 30±10 months) was obtained in 385 pts (98.7%). Stent implantation was performed in 239 patients (61%) with more than 1 stent in 36 cases (15.9%). Saphenous vein graft PCI was performed in 76 patients (19.5%). Primary success was obtained in 378 cases (96.9%). The 3-year event-free survival (freedom from death, freedom from death/MI/TVR and freedom from death/MI/any coronary revascularization) were (mean±SE) 91 ± 1%, 70 ± 2% and 64 ± 3% respectively. Lower left ventricular ejection fraction was found to be an independent predictor of death during follow-up (HR, 95%CI: 0.12 (0.01-1.0); p=0.05). At 3-year follow-up, freedom from TVR and any coronary revascularization were 77 ± 2% and 72 ± 2% respectively. Single stent implantation was found to be an independent predictor of TVR (HR, 95%CI: 0.32 (0.11-0.96); p=0.04). Neither lesion length, nor stent implantation, nor stented segment length were found to be independent predictors of cardiac events at follow-up.

Conclusion: This study provided a useful assessment of long-term outcome in terms of survival, event-free survival and predictors of major cardiac events after long lesion PCI.